The Report Committee for Marie-Elena Bucciero
Certifies that this is the approved version of the following report:

Rethinking Teacher Retention in New York City Middle Schools: A Focus on Retaining the Highest-Performing Teachers Through Effective School Leadership

APPROVED BY
SUPERVISING COMMITTEE:

Supervisor:

Paul von Hippel

Angela Evans

Rethinking Teacher Retention in New York City Middle Schools: A Focus on Retaining the Highest-Performing Teachers Through Effective School Leadership

by

Marie-Elena Bucciero, BA

Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Public Affairs

The University of Texas at Austin

May 2013

Dedication

This paper is dedicated to my older cousin, Lori. Up until April of this year I had only read in research the stories of teachers losing their jobs because of budget cuts and seniority hierarchies in schools. After dedicating a decade of her life to teaching high school English, Lori was informed that she was being let go by her school at the end of this school year. The decision was simple for the school. She was lowest of the totem pole of teachers who had been teaching at her school, as the district instituted a hiring freeze the year after she was hired. Lori and many other teachers from her school are now faced with the difficult choice. Should they start over and fight for another three years in hope of getting tenure in another district, eventually facing the risk of being left in the same position from which they just rebounded, or should they just move on to another profession?

Teacher performance and evaluation played no role in the decision to let go of these teachers. Teachers like my cousin—who go above and beyond the normal teaching role by offering to teach night classes, coaching various sports, and putting hours of extra work into her students—are disillusioned with a system that has ultimately let them down.

This report is dedicated to those who can do nothing but stand idly by as they lose their jobs because for decades the education system has failed to deliver a useful and fair teacher evaluation system that places emphasis on something more than just the number of years a teacher has spent in the classroom. I hope the system does not lose her because, in the end, it is only the students who suffer by being denied the opportunity to be taught by someone like Lori.

Acknowledgements

I would like to thank Professors Angela Evans and Paul von Hippel for their commitment to helping me refine this report. I would also like to thank my former colleagues in the Office of Teacher Recruitment and Quality at the New York City Department of Education for introducing me to the problem of teacher retention in NYC and keeping me abreast on all of the latest research on the topic.

Abstract

Rethinking Teacher Retention in New York City Middle Schools: A Focus on Retaining the Highest-Performing Teachers Through Effective School Leadership

Marie-Elena Bucciero, MPAff

The University of Texas at Austin, 2013

Supervisor: Paul von Hippel

This report gives an in-depth study of the relationship between effective school leadership and teacher retention. It reviews existing literature that establishes the connection between effective school leadership and lower rates of teacher turnover. The report then attempts to find the relationship among effective school leadership, teacher retention, and student achievement in New York City middle schools. The report also highlights the important processes and strategies that the New York City Department of Education employs in an effort to increase teacher retention. A closer look at The New Teacher Project's 2012 Report, "The Irreplaceables," redirects the report to recommend retention efforts that focus on retaining the city's highest-performing teachers instead of using "blind" retention strategies. In the end, the report summarizes the political climate in New York City between the teachers' union and the district and recommends four strategies that keep this relationship in mind.

Table of Contents

List of Tables ix

Chapter 1: Introducing Teacher Retention 1

Chapter 2: Statistical Analysis 5

- Data and Design 5
- Limitations 9
- Methods 12
- Results 13
- Conclusion 17

Chapter 3: History of Strategies Addressing Retention in New York City 19

- Teacher Compensation 21
- Teacher Recruitment and Retention 24
  - Alternative Certification 28
  - School Leadership 29
    - New York City Leadership Academy 29
    - Middle School Leader Internship 31
  - Mentoring 33
- Teacher Evaluation and Accountability 34
- Conclusion 36

Chapter 4: Smart Retention. The TNTP "Irreplaceables" Study 38

- Shifting Away From "Blind" Retention Strategies 41
- Perceptions 44
- Causes 45
- Conclusion 46

Chapter 5: Recommendations 47

- The political climate over teacher evaluation 47
- Recommendations 50

References 56

List of Tables

Table 1. Distribution of School Characteristics Data 6

Table 2. Distribution of Teacher Retention and Principal Experience Data..... 7

Table 3. Distribution of Student Achievement Data..... 8

Table 4. Distribution of School Leadership Data 9

Table 5. Effect of School Leadership Score on Teacher Retention 13

Table 6. Effect of School Leadership Score on Teacher Retention with Controls 14

Table 7. Effect of School Leadership Score on Student Achievement in Math ... 15

Table 8. Effect of School Leadership Score on Student Achievement in Math with Controls 15

Table 9. Effect of School Leadership Score on Student Achievement in ELA 16

Table 10. Effect of School Leadership Score on Student Achievement in ELA with Controls 17

Chapter 1: Introducing Teacher Retention

Much attention in education policy is paid to teacher effectiveness and student achievement. Reformers look to many different aspects of schools to explain why they are failing. These aspects include teacher quality, class size, resources, students' socio-economic and racial background, and parental engagement. Often overlooked is the role that school leadership plays in a school's success.

This report focuses on effective school leadership and its role in teacher retention. Measuring effective school leadership and its relationship to teacher retention and student achievement is a relatively new focus of research, and there are few studies that show their relationship. Of the studies that do exist, there is an overwhelming consensus that school leadership has a significant affect on both teacher retention and student achievement.

A study from the early nineties attempted to explain the indirect effects of principals on student achievement (Brewer, 1993). The study presented an empirical analysis of the effects of principals on public high school students' academic achievement using *High School and Beyond* (HSB), a longitudinal data set collected by the U.S. Department of Education from 1980-1986 (Brewer, 1993). HSB sampled 36 sophomores and 36 seniors from 1100 high schools who were administered a series of cognitive tests measuring verbal and quantitative ability in 1980 (Brewer, 1993). The paper was written during a period of school reform proposals that encouraged increased principal authority in public schools (Brewer, 1993). The author noted that because of

school size and time constraints, principals are usually viewed as being removed from direct contact with most students. This explanation has been used in the past to avoid studying the relationship between principals and student achievement (Brewer, 1993). Brewer argued that the principal plays an indirect role in student achievement through the selection and motivation of teachers (Brewer, 1993). He stated that his paper confirmed the findings of Eberts and Stone (1988) relating to elementary schools, who argued that "principals matter for student achievement gains" (Brewer, 1993). In particular, the study indicated that principals' selection of teachers, and setting of clear and academically oriented school goals, were the variables that influence student achievement gains (Brewer 1993).

A study that found similar results to Brewer's 1993 paper include a study of 79 middle schools in Missouri (Mees, 2008). Similar to the statistical analysis in chapter 2 of this report, Mees collected quantitative data through the Principal Leadership Questionnaire and the School Culture Survey (Mees, 2008). Also like the analysis in chapter 2, to control for socioeconomic status, Mees used the percent of students eligible for free-and-reduced-priced lunch (Mees, 2008). The study found that transformational leadership—a flexible approach to change, which allows a leader's personal style and context to vary to solve problems while raising followers' commitment, motivation, and empowerment—and school culture, shaped by the principal, correlated positively to student achievement (Mees, 2008).

The research comparing the relationship between teacher retention and principal leadership is more persuasive. One study from the University of North Carolina at

Chapel Hill found that nearly one-third of new teachers leave teaching within the first three years (Brown & Wynn, 2009). The study quoted Ingersoll and Smith's (2004) finding that during the 1999-2000 school year, 29 percent of first-time teachers who entered the field either moved to a new school at the end of the year (15 percent migration rate) or left the teaching profession altogether (14 percent attrition rate) (Brown & Wynn, 2009). The study pointed to the duel focuses of school leaders to both attract new, energetic teachers while also retaining the teachers on staff (Brown & Wynn, 2009). Unlike other studies, Brown and Wynn focused on 12 principals who led schools that had low attrition and transfer rates (Brown & Wynn, 2009). Through this process they were able to identify some common characteristics of successful strategies the school leaders used to support and retain teachers (Brown & Wynn, 2009). Their study concluded that principals who have an awareness of issues affecting new teachers, a proactive approach in supporting new teachers, and a commitment to professional growth and excellence for themselves, their students, and their teachers (new and veteran alike), retained teachers at a higher rate than their peers (Brown & Wynn 2009).

A National Convention on Teacher and America's Future (NCTAF) study found the most serious long-term consequence of high teacher turnover is the erosion of teaching quality and student achievement, making it difficult to build learning communities and sustain reform (Barnes, Crowe, & Schaefer, 2002). Other researchers agreed and explained that when a school loses a good teacher, the school also loses that "teacher's familiarity with school practices; experience with the school's curriculum; and involvement with students, parents, and colleagues" (Johnson, & Birkeland 2003). The

NCTAF study argued that high turnover undermines the sense of community that is necessary to establish a strong school (Barnes, Crowe, & Schaefer, 2002). Although pay and other factors influence retention, teacher participation in decision making, administrative support, and school climate are all statistically associated with teacher turnover (Brown & Wynn 2009).

Finally, a study of teacher retention in New York City established the notion that, "when given the opportunity, many teachers choose to leave schools serving large concentrations of poor, low-performing, and non-White students" (Boyd, et. al., 2011). Using a data set that combined longitudinal survey data with district administrative files the study found that teachers' perceptions of the school administration had by far the greatest influence on teacher retention decisions (Boyd, et. al. 2011). This effect of administration is consistent for first-year teachers and the full sample of teachers, and is confirmed by a survey of teachers who have recently left the profession (Boyd, et. al. 2011).

The following chapter will describe the statistical analysis used to determine the relationship between school leadership and teacher turnover and student achievement in New York City middle schools.

Chapter 2: Statistical Analysis

The majority of research relating school leadership quality to teacher retention and student achievement is based on elementary and high school data. Analyzing data from middle schools offers an opportunity to find new results and relationships that have potential to affect policy decisions. Although many reform efforts are targeted at early education, to improve student achievement, and high schools, to increase graduation rates, a newer trend in education policy is to focus on the time in between. As there is more focus in education policy to make sure students are college and career ready upon graduation, studies, like the 2005 report from ACT, suggest that college readiness begins in middle school (Wimberly & Noeth, 2005). Furthermore, research also finds that middle schools, more so than elementary and high schools, are harder to staff—especially those located in urban districts (Dwyer, 2007). With this in mind, this statistical analysis focuses on New York City middle schools.

This chapter analyzes the correlation between school leadership quality and its effects on both teacher retention and student achievement. It uses school survey, teacher retention, student achievement, student demographic, and student achievement data from middle schools in New York City. Results of this study show that school leadership plays a significant role in both teacher retention and student achievement.

DATA AND DESIGN

Data on most New York City school characteristics can be publicly accessed on the NYC Department of Education's (DOE) accountability page on its website. Data was collected on schools' percentage of students receiving free-and-reduced-priced lunch (FRPL), percentage of special education students served, and percentage of English language learners (ELL) using the DOE's website (NYC Department of Education). The DOE also collects and publishes data on class size, which used in this study's calculation of pupil per teacher ratio (NYC Department of Education). Using FRPL percentages by school allows the study to control for the socioeconomic status of a school's students, because FRPL is a measure of a student's family's household income. This variable, combined with the percentage of special education and ELL students served, allows the study to control for schools deemed "high-needs" and "hard to staff." Pupil per teacher ratio is often cited as an influencer of student achievement and adds another control to the study. The distribution of this data is shown in Table 1.

Table 1. Distribution of School Characteristics Data

	Max	Min	Median	Standard Deviation
% FRL	100.00	10.60	75.30	18.78
% Special Ed Served	41.40	0.00	18.20	6.39
% ELL	49.90	0.00	9.60	11.21
Pupil per Teacher Ratio	21.03	5.99	14.22	2.76

To measure teacher retention rates, data was collected from the Human Resources Hub in the DOE's Office of Research and Data on the percentage of teacher turnover recorded during the 2011-12 school year. Data using principal experience was collected

from the same office and measures how many years a principal has been teaching at the school in which he or she is currently employed. The distribution of this data is shown in Table 2.

Table 2. Distribution of Teacher Retention and Principal Experience Data

	Max	Min	Median	Standard Deviation
Turnover Rate	80.00	0.00	13.33	11.08
Principal Experience	49.23	0.15	5.00	4.20

Data on student achievement was collected accessing the DOE's public website that publishes schools' previous years' test scores. For the purposes of this study, we collected 8th grade mathematics and English Language Arts (ELA) proficiency scores. The DOE disaggregates math and ELA scores by presenting the percentage of students at four different proficiency levels.

Description of Levels for ELA and math tests:

- **Level 1**: *Below Standard*: Student performance does not demonstrate an understanding of the subject matter and skills expected at this grade level.
- **Level 2**: *Meets Basic Standard:* Student performance demonstrates a partial understanding of the subject matter and skills expected at this grade level.
- **Level 3**: *Meets Proficiency Standard:* Student performance demonstrates an understanding of the subject matter knowledge and skills expected at this grade level.
- **Level 4**: *Exceeds Proficiency Standard:* Student performance demonstrates a thorough understanding of the subject matter knowledge and skills expected at this grade level.[1]

For the purposes of this study, we measured the percentage of students at level 1 and 2 because they are below proficiency. The distribution of the data is shown in Table 3.

[1] Description available online at: http://www.queensburyschool.org/news/docs/SED_3-8_FAQ_Parents.pdf

Table 3. Distribution of Student Achievement Data

% Students at levels 1 & 2	Max	Min	Median	Standard Deviation
Math	98.1	0.00	51.30	22.18
ELA	95.3	2.80	70.50	20.81

Finally, to measure school leadership and effectiveness, data was collected from the 2012 NYC School Survey. Students, teachers, and parents complete the survey annually online. For the purpose of this study, only data reflecting teachers' opinions were used because our study is measuring teacher response to school leadership through retention. For the 2012 survey, teachers recorded an 82 percent response rate across the city. School leaders include principals, vice principals, deans, and other teacher leaders. To gain a quantitative measure on school leadership and effectiveness based on teacher opinion, the responses to 14 different questions were averaged together to calculate one total score ranging between 1-10. The responses to the following 14 questions were factored into the final school leadership score (SLS):

1. School leaders communicate a clear vision for this school.
2. School leaders let staff know what is expected of them.
3. School leaders encourage open communication on important school issues.
4. The principal places the learning needs of children ahead of other interests.
5. The principal is an effective manager who makes the school run smoothly.
6. I trust the principal at his or her word.
7. To what extent do you feel supported by your principal? * [2]
8. The principal has confidence in the expertise of the teachers.
9. School leaders invite teachers to play a meaningful role in setting goals and making important decisions for this school.

[2] * Responses to this question differed from the other 13. A response of "To a great extent" = score of 10; "To some extent" = score of 6.6; "To a small extent" = score of 3.3; "To no extent" = score of 0; "Does not apply" = no score.

10. School leaders provide time for collaboration among teachers.
11. School leaders visit classrooms to observe the quality of teaching at this school.
12. School leaders give regular and helpful feedback about my teaching.
13. School leaders place a high priority on the quality of teaching at this school.
14. School leaders celebrate learning successes at this school.

Teachers responded to all questions with one of five possible responses:

1. Strongly agree = score of 10
2. Agree = score of 7.5
3. Don't know = score of 5
4. Disagree = score of 2.5
5. Strongly disagree = score of 0

All fourteen scores were averaged together to gain one SLS per school. The distribution of the data is shown in Table 4.

Table 4. Distribution of School Leadership Data

	Max	Min	Median	Standard Deviation
SLS	9.88	2.00	7.22	1.4

LIMITATIONS

The following section describes potential limitations of the statistical analysis due to the exclusion of certain middle schools from the data set. This section explains why including certain middle schools would have compromised the analysis because either the data publicly available for these middle schools were missing some of the variables included in the analysis, or including the data would have skewed the results for reasons described in the section. Although the study had fewer observations than the actual

number of middle schools in New York City, the sample size was still large, and data was left uncompromised.

The study contained 265 middle schools located in all five boroughs: Brooklyn, Queens, Manhattan, Staten Island, and the Bronx. Over 160,000 students are represented in the data, covering all 32 racially and economically diverse districts of New York City. All data collected reflected the 2011-12 school year. There was no missing data for any of the variables used in the study.

The DOE describes schools' grade levels as Early Education, Elementary, High School, Junior High/Intermediate School, K-12 (all grades), K-8, and secondary school. For the purpose of this study, to make sure results were based solely on data from middle school teachers and school leaders, data was filtered to only schools labeled as "Junior High/Intermediate School" by the DOE. By doing this, the study excludes a number of middle school teachers, principals, and students. However, these data could have skewed results since K-8 and K-12 schools operate differently than 6-8 grade middle schools. K-12 and K-8 schools have additional school leaders and administrators because they serve a larger range of grades so results on the NYC School Survey from these schools may not reflect the leadership focused on the typical middle schools grades (6-8) and would compromise the analysis.

District 75 (D75) schools were not included in the study due to their designation as solely for the purpose of educating special needs and disabled students. The city describes the purpose of D75 schools on their website as "schools [that] provide citywide educational, vocational, and behavior support programs for students who are on the

autism spectrum, have significant cognitive delays, are severely emotionally challenged, sensory impaired and/or multiply disabled" (NYC Department of Education). Furthermore, all D75 schools that include grades 6-8 are labeled as K-8 or K-12 schools. The data from D75 would have significantly skewed data related to student achievement because special education students score significantly lower than their peers on state assessments and many are also exempt from taking the exams used in the analysis.

Additionally, Harbor Heights in Manhattan and Academy for New Americans in Queens were excluded from the study. Although data was available, both schools are dedicated to educating the children of immigrants. ELL student percentages at each school are over 90 percent, while the maximum for all other middle schools is 49.9 percent. Like the data from D75 schools, keeping these schools in the study would have significantly skewed the findings regarding student achievement because ELL students score significantly lower than their peers on state assessment.

Schools that were opened in 2011 were not included in the study. Newly opened schools experience challenges including acclimation to new staff, students, facilities, and principal that could potentially distort the data. Moreover, many of the variables included in the survey were not available for schools opened in 2011. This decision excluded five schools from the study.

Nine additional schools were excluded because information for one or more of the variables used in the study was not reported. [3]

[3] It is unclear from the NYCDOE as to why this information is not available for certain schools.

For the purposes of this study, it is assumed that all teachers responded truthfully to the 14 questions aggregated. However, it must be noted that despite the anonymous nature of the survey, there still remains the limitation that teachers may have censored their answers because their principals and other school leaders eventually receive the data. In smaller schools, with fewer staff, it may be obvious to school leaders which teachers responded to certain questions. This could potentially skew data because teachers may be responding to questions differently from how they actually feel about their school leaders. However, there are few quantitative measures of school leadership, especially based on the opinion of the staff. Using the NYC School Survey allowed the study to focus on specific qualities important in school leadership that no other measure would have been able to reflect.

METHODS

The study utilized regression analysis using STATA to determine the relationships between the variables. Regression analysis was used because the study attempted to test the relationship of school leadership score (SLS) on three different independent variables in three different tests (teacher retention, percentage of students at level 1 and 2 on 8th grade state math assessment, and percentage of students at level 1 and 2 on 8th grade ELA assessment). Furthermore, regression analysis allowed for the adding of a number of controls, including percentage of students receiving free-and-reduced-priced lunch, percentage of special education students served, percentage of English language learners, and pupil-to-teacher ratio, to further validate the results.

Most importantly, regression analysis allows results to demonstrate a relationship between variables that can easily be made applicable to policy recommendations. For instance, if SLS is statistically significant, and as it increases, the percentage of students in a school scoring at level 1 and 2 on 8th grade math assessments decreases, then policy analysts should delve deeper into the characteristics that make up the SLS score and determine how they can potentially influence student math achievement.

Controls for the analysis were chosen because they are the variables most commonly referred to in discussions of student achievement and teacher retention. Without considering student economic background, special education, English language proficiency, and class size, results would not have been valid because these variables are negatively correlated with student achievement and teacher retention.

RESULTS

The first test completed was the effect of school leadership score on teacher retention rates. Table 5 summarizes the results.

Table 5. Effect of School Leadership Score on Teacher Retention

Turnover Rate	Coefficient	Std. Err.	t	P>t	[95% Conf. Interval]	
SLS	-2.938974	0.4522103	-6.5	0.0000*	-3.829387	-2.04856
Constant	37.04854	3.304999	11.21	0.0000	30.54092	43.55617

R-squared	0.1384
Observations	265

The results show that at 95 percent confidence, SLS is statically significant. As SLS increases, teacher turnover rate decreases. The model is made more valid by adding a number of controls. Results are shown in Table 6.

Table 6. Effect of School Leadership Score on Teacher Retention with Controls

Turnover Rate	Coefficient	Std. Err.	t	P>t	[95% Conf. Interval]	
SLS	-2.512057	0.4459	-5.63	0.0000*	-3.390322	-1.633793
% FRL	0.1057172	0.0561	1.88	0.0610	-0.0047737	0.216208
% Special Ed	0.2428723	0.1451	1.67	0.0950	-0.0429563	0.5287009
% ELL	-0.0672988	0.0702	-0.96	0.3390	-0.2055926	0.0709949
% Math (level 1 & 2)	0.1360173	0.0517	2.63	0.0090*	0.0342071	0.2378274
% ELA (level 1 & 2)	-0.1060788	0.0797	-1.33	0.1850	-0.2631071	0.0509496
Pupils per teacher	-0.1646546	0.3347	-0.49	0.6230	-0.8239458	0.4946367
Constant	25.31429	8.2353	3.07	0.0020	9.09689	41.53169

R-squared	0.2499
Observations	265

After adding the controls, SLS remains significant. The only other significant variable in the model is the percentage of students at level 1 and 2 proficiency on state math assessments. Although the model only accounts for about a quarter of variation in teacher retention that is explain by the variables, the model is consistent with existing research that explains that, above all other variables, a teachers' perceived ability of their school leadership, is the greatest factor in retention.

Next, the effect of SLS was tested on student achievement in math. The initial results are shown in Table 7.

Table 7. Effect of School Leadership Score on Student Achievement in Math

% Math (level 1 & 2)	Coefficient	Std. Err.	t	P>t	[95% Conf. Interval]	
SLS	-3.660576	0.9486	-3.86	0.0000*	-5.5284	-1.792752
Constant	75.57558	6.9329	10.9	0.0000	61.92451	89.22665

R-squared	0.0536
Observations	265

The results show that at 95 percent confidence, SLS is statistically significant. As SLS increases, the percentage of students scoring at the 1 and 2 levels on state math assessments decreases. The model is made more valid by adding a number of controls. Results are shown in Table 8.

Table 8. Effect of School Leadership Score on Student Achievement in Math with Controls

% Math (level 1 & 2)	Coefficient	Std. Err.	t	P>t	[95% Conf. Interval]	
SLS	-1.81651	0.6962	-2.61	0.0100*	-3.187607	-0.4454133
% FRL	0.5401755	0.0690	7.82	0.0000*	0.4041529	0.6761982
% Special Education	1.108313	0.2106	5.26	0.0000*	0.6935042	1.523122
% ELL	-0.1453393	0.1038	-1.4	0.1630	-0.3498569	0.0591782
Pupils per teacher	-0.517407	0.5319	-0.97	0.3320	-1.565016	0.5302017
Principal Experience	-0.8284319	0.2292	-3.61	0.0000*	-1.279819	-0.3770449
Constant	16.96476	13.0183	1.3	0.1940	-8.671021	42.60054

R-squared	0.5221
Observations	265

As expected, the percentage of students receiving free-and-reduced-priced lunch and percent special education served are both significant. As both variables increase, the percentage of students at level 1 and 2 proficiency in math increases. SLS is also found to be significant in the model. As SLS increases, the percentage of students at level 1 and 2 proficiency in math decreases by a greater magnitude than any other variable in the

model. The model explains more than half of the variation in the percentage of students scoring at level 1 and 2 in math.

Finally, the effect of SLS was tested on student ELA proficiency. The results are shown in Table 9.

Table 9. Effect of School Leadership Score on Student Achievement in ELA

% ELA (level 1 & 2)	Coefficient	Std. Err.	t	P>t	[95% Conf. Interval]	
SLS	-3.694649	0.8861	-4.17	0.0000*	-5.439491	-1.949807
Constant	91.37885	6.4764	14.11	0.0000	78.62659	104.1311

R-squared	0.062
Observations	265

The results show that at 95 percent confidence, SLS is statistically significant. As SLS increases, the percentage of students scoring at the 1 and 2 levels on state ELA assessments decreases at about the same magnitude as shown in math assessment in Table 8. The model is made more valid by adding a number of controls. Results are shown in Table 10.

Table 10. Effect of School Leadership Score on Student Achievement in ELA with Controls

% ELA (level 1 & 2)	Coefficient	Std. Err.	t	P>t	[95% Conf. Interval]	
SLS	-1.500069	0.4528	-3.31	0.0010*	-2.391728	-0.6084095
% FRL	0.6032325	0.0449	13.43	0.0000*	0.5147735	0.6916915
% Special Education	1.009625	0.1369	7.37	0.0000*	0.739864	1.279386
% ELL	0.2604941	0.0675	3.86	0.0000*	0.1274912	0.3934971
Pupils per teacher	-0.4947681	0.3459	-1.43	0.1540	-1.176055	0.1865185
Principal Experience	-0.5037891	0.1490	-3.38	0.0010*	-0.7973375	-0.2102406
Constant	20.12101	8.4661	2.38	0.0180	3.449406	36.79261

R-squared	0.7704
Observations	265

Again, as expected, and like the results shown in math proficiency, the percentage of students receiving free-and-reduced-priced lunch and the percentage of students receiving special education are statistically significant, and as they increase, the percent of students scoring level 1 and 2 on ELA state assessments increases. Predictably, the percentage of ELL students is also statistically significant in the model, and as the percent increases, the percent of students scoring level 1 and 2 on ELA state assessments increases. Finally, SLS is found to be significant in the model. As SLS increases, the percent of students at level 1 and 2 proficiency in ELA decreases by a greater magnitude than any other variable in the model. The model explains more than three-quarters of the variation in the percentage of students scoring at level 1 and 2 in ELA.

CONCLUSION

The results yielded by this analysis indicate that school leadership has a significant effect on both teacher retention and student achievement. Based on the

responses that teachers completed in the NYC School Survey, as school leadership scores increase—or as school leaders are considered more effective in their leadership skills by their staff—teacher turnover decreases and fewer students are scoring at level 1 and 2 on 8th grade state assessments in math and ELA.

These results were shown when controlling for common factors that influence student achievement and teacher retention, including student socioeconomic background, special education, and the percentage of ELLs in schools. In fact, in most results in the study, SLSs were just as significant as other variables and usually impacted one of the three dependent variables to a greater magnitude than other variables.

Future studies may yield even stronger results if they include more controls that reflected school resources and parental engagement. Variables like these are other factors that often influence student achievement and teacher retention.

Now that the relationship between effective principal leadership, and teacher retention, and student achievement is understood, it is important to study the current practices implemented in New York City middle schools that target teacher retention so that school leadership strategies can be studied and improved. The following chapter will delve into these strategies.

Chapter 3: History of Strategies Addressing Retention in New York City

In order to offer strategies to improve retention in New York City middle schools it is important to understand the strategies currently in place so that the recommendations proposed in this report fit into the DOE's capacity to effectively address retention. Although the majority of programs and processes presented in this chapter do not solely target middle schools, their success or failures can be used to indicate how certain aspects of the strategies will fare in future policies directed at improving teacher retention in middle schools.

This chapter of the report will rely heavily on the work of Margaret Goertz, Susanna Loeb, and Jim Wyckoff. Their paper, "Recruiting, Evaluating and Retaining Teachers: The Children First Strategy to Improve New York City's Teachers," offers the most comprehensive review of reforms targeting human resource strategies that are of particular importance to this paper. Most importantly, the paper is uniquely focused on solely New York City and provides evaluations of certain programs when available.

At the turn of the 21st century, teacher recruitment and retention in New York City was recognized as one of the biggest challenges for the city's Department of Education (DOE) (Goertz, Loeb & Wyckoff, 2010). Between 1995 and 2002, nearly half of all new teachers were uncertified. Twenty-five percent of teachers hired in 1999-2000 failed the New York State certification exam on their first attempt, and 26 percent had attended undergraduate institutions rated by Barrons as uncompetitive (Goertz, Loeb & Wyckoff, 2010). On average, new teachers hired during the 1999-2000 school year had average math and verbal SAT scores of 466 and 477 respectively (Goertz, Loeb & Wyckoff, 2010). The concentration of uncertified teachers was highest in schools with the highest percentage of poor students (measured by the number of students qualifying for free-and-

reduced-priced lunch) (Goertz, Loeb & Wyckoff, 2010). For example, only 4 percent of teachers were uncertified in the 10 percent of elementary schools with the lowest percentage of poor children, while over 20 percent of teachers in the schools with the highest measures of students receiving free-and-reduced-priced lunch were uncertified (Goertz, Loeb & Wyckoff, 2010). These statistics alerted the district about their ineffective recruitment practices and further analysis pointed toward ineffective retention strategies.

Retention in New York City was especially a problem in the hardest-to-staff schools, in the poorest communities, and among the city's most qualified teachers (Goertz, Loeb & Wyckoff, 2010). Between 1996 and 2002, only 20 percent of new teachers who scored in the top quartiles on the certification exam left high-performing schools following their first year of teaching (Goertz, Loeb & Wyckoff, 2010). Meanwhile, 34 percent of those same new teachers scoring in the top quartiles left hard-to-staff, low-achieving schools after only one year of teaching (Goertz, Loeb & Wyckoff, 2010). At the same time, 14 percent of new teachers scoring in the bottom quartile on the certification exam left high-performing schools after one year, and 17 percent left low-achieving schools after one year (Goertz, Loeb & Wyckoff, 2010). Although performance on a teacher certification exam may not be the best indication of how well a teacher will perform in the classroom the data does show a serious retention problem for low-performing schools.

In recognition of these problems, the NYC Department of Education has taken several steps in the last 20 years to strengthen the teaching profession in the city to attract and retain the best teachers available. It is impossible to have a discussion about hiring and retention practices without discussing the policies, structures, and regulations that impact the supply of teachers in New York City and how they have been modified over

time. These structural features, including compensation, recruitment, retention strategies, and teacher evaluation and accountability are discussed in the following sections.

TEACHER COMPENSATION

Today the starting salary for a New York City teacher with no prior teaching experience with a bachelor's degree is $45,530 and $51,425 with a master's degree (Department of Education). Historically, New York City teacher's salaries were about 20 percent lower than the average starting salaries in the city's suburban school districts (Goertz, Loeb & Wyckoff, 2010). For example, in 2001 New York City teachers' salaries ranged from $31,000 to $70,000 (Greenhouse, 2001). At the same time, Yonkers, a suburb of the city boasted salaries ranging from $40,000 to $90,000 (Greenhouse, 2001). The significant difference in salary leads to the noted pattern of teachers starting their career in the city where there are more open positions and moving to suburban school districts after one to five years (Bower, 2010). This difference in salaries creates a significant disadvantage to the Department of Education's retention efforts (Goertz, Loeb & Wyckoff, 2010).

From 2000 to 2008, the salaries for teachers with a BA with no prior experience increased by over 35 percent, translating to a 13 percent increase after adjusting for inflation (Goertz, Loeb & Wyckoff, 2010). This increase was also felt by teachers throughout the salary schedule who received similar percentage increases, making New York City slightly more competitive with its suburban neighbors (Goertz, Loeb & Wyckoff, 2010).

During this time, the DOE also began offering a series of financial incentives to both attract and retain teachers in the hardest-to-staff schools. In 2007, in collaboration with the United Federation of Teachers (UFT) (New York City's American Federation of Teachers affiliate), the DOE implemented the New York City School-Wide Performance Bonus Program (SPBP) (Center For Education Compensation and Reform, 2010). SPBP offered teachers in high-need schools bonuses of $3,000 based on their school's ability to meet performance targets and advance student achievement (Goertz, Loeb & Wyckoff, 2010). Although the bonuses were granted as whole-school awards, they afforded teachers a voice in the decisions regarding allocation (Center For Education Compensation and Reform, 2010). Despite being the first performance-pay program in a school district of such size and varied student population, the program was abandoned in 2011 (Otterman, 2011). The city cited its decision to abandon the program amidst budget concerns and in light of a study that found the bonuses had no positive effect on either student performance or teachers' attitudes toward their jobs meaning it was unlikely to attract and retain teachers (Otterman, 2011).

To increase not only teacher compensation and retention, but also to afford teachers pathways to leadership opportunities, the DOE introduced the Lead Teacher Program in 2006 (Goertz, Loeb & Wyckoff, 2010). Through a competitive interview process in collaboration with the UFT, the Lead Teacher Program identifies excellent teachers to mentor and coach other teachers in low-performing schools (Goertz, Loeb & Wyckoff, 2010). Lead teachers spend half their time in the class-room and the other half mentoring and providing professional development to other teachers are given a $10,000 supplement each year (Department of Education). This program is still offered today to New York City teachers.

The city also offers various loan forgiveness programs through the federal government (Department of Education). Furthermore, the Conversion Program provides tuition reimbursement at the City University of New York tuition rate to New York State teachers certified in non-shortage areas to offer the opportunity to become certified in shortage areas and teach in New York City schools (Goertz, Loeb & Wyckoff, 2010).

The DOE also recognized the high cost-of-living factors that contribute to teachers' decisions to avoid teaching in the city. In 2006, New York City introduced the Housing Support Program, which offered housing subsidies up to $14,600 to attract new math, science, and special education teachers to work in the city's most challenging schools (Herszenhorn, 2006). The incentive program was established to address the city's chronic shortage of qualified teachers in these specialty areas (Herszenhorn, 2006). In order to receive the subsidy that is still offered today, teachers must have at least two years of teaching experience in the needed subject area, specified by the DOE (Department of Education).

In addition to New York City initiated programs, the DOE also administers different state compensation incentives. The largest is the Teachers of Tomorrow Program, which offers new hired certified teachers a tax-free grant of $3,400 for each year of satisfactory service (up to four years) if they teach in qualifying high-needs schools (Goertz, Loeb & Wyckoff, 2010).

The programs described are important to consider when recommending new strategies for retention in the city. It is important to not only work within the programs that are already available to teachers, but also to consider the programs that have failed in the past. These considerations will be reflected upon in the final chapter of this report.

Consistent with research on teacher compensation, policies employing compensation as a strategy have had varying effects on targeting teacher recruitment and

retention in New York City. Despite the results, it is still important to understand the capacity the DOE has to use monetary incentives to affect retention strategies when offering recommendations to the district.

TEACHER RECRUITMENT AND RETENTION

Before the DOE upgraded to a computer-based system of processing transactions among teacher hires and transfers, New York City was losing qualified teachers due to the DOE's inefficient paper-based tracking system (Goertz, Loeb & Wyckoff, 2010). This system often caused teachers to not receive job offers until late August, still often unsure of school assignment (Goertz, Loeb & Wyckoff, 2010). Before changes instituted in 2005, New York City also used a seniority-based transfer policy, where teachers who had certification matching a job opening would receive priority in the application queues based on their years of experience (Goertz, Loeb & Wyckoff, 2010). The DOE also had a pool of "excessed" teachers who had been relieved of their teaching positions due to falling school enrollments, budget cuts, programmatic changes, or school closures (Goertz, Loeb & Wyckoff, 2010). These "excessed" teachers would potentially displace less senior teachers in other schools (Goertz, Loeb & Wyckoff, 2010). These combined factors often meant that school leaders had little control over who would be part of their teaching staff at the beginning of the school year (Goertz, Loeb & Wyckoff, 2010). These processes working in tandem at times created a system where vacancies were not realized until late summer, when the most qualified teachers had already taken other positions (Goertz, Loeb & Wyckoff, 2010).

The old transfer policy system had one loophole to make sure it was not a pure seniority-based system (Goertz, Loeb & Wyckoff, 2010). As part of a 1995 collective bargaining agreement, where with a favorable vote of the UFT members in a school, the school could opt to determine transfer hiring by a committee made up of a group of teachers and the principal (Goertz, Loeb & Wyckoff, 2010). This "School-Based Option" allowed a less experienced applicant to be selected over a teacher with more experience if the committee determined that the applicant possessed "extraordinary qualifications" (Goertz, Loeb & Wyckoff, 2010). All schools that opted for the School-Based Option used this process to fill teacher vacancies, proving to be an important initial gain toward eliminating seniority-based transfers, which would eventually be a part of the 2005 collective bargaining agreement (Goertz, Loeb & Wyckoff, 2010). Goertz, Loeb, and Wyckoff estimate from 2004 to 2006, 35 percent of schools in New York City chose the School-Based Option (Goertz, Loeb & Wyckoff, 2010).[4]

However, even in schools that did not opt for the School-Based Option, not all transfers were based on seniority (Goertz, Loeb & Wyckoff, 2010). In these schools, seniority-based transfers filled half of all vacancies while the remaining vacancies were often filled through other arrangements, like personal networking (Goertz, Loeb & Wyckoff, 2010). With this process, effective and energetic principals were able to hire teachers based on qualifications other than seniority (Goertz, Loeb & Wyckoff, 2010). Meanwhile, less energetic or new principals—more-often-than-not leading low-performing schools—experienced more difficulty locating, hiring, and retaining effective teachers (Goertz, Loeb & Wyckoff, 2010).

[4] It is not clear the effect this had on diminishing the seniority system in schools that chose to use the School-Based Option

The city has attempted to remedy recruitment processes and timing during the past decade. The Office of Teacher Recruitment and Quality in the Human Resources office of the Department of Education moved from a paper-based system to an online system called the New Teacher Finder tool to help connect new hires to school openings (Goertz, Loeb & Wyckoff, 2010). The tool allows principals to post requests for resumes and review applications and interview prompts that applicants complete (Goertz, Loeb & Wyckoff, 2010). The DOE has also increased the frequency of hiring fairs during the summer months (Goertz, Loeb & Wyckoff, 2010).

The DOE has also made several central-processing changes to prevent the loss of talented teachers due to late hiring schedules. To allow school leadership enough time to assess vacancies, budgets are now determined in the spring (Goertz, Loeb & Wyckoff, 2010). Also, new teaching hiring is no longer delayed until after transferring and excessed teachers are placed (Goertz, Loeb & Wyckoff, 2010). To help fill high-needs positions in hard-to-staff schools, the district is able to make "central commitments" throughout the spring to fill shortage areas and keep highly-qualified candidates from taking positions outside of the city (Goertz, Loeb & Wyckoff, 2010).

In an effort to increase retention among effective teachers, the DOE and UFT agreed to a new contract in 2005 to increase each individual school's authority over hiring (Goertz, Loeb & Wyckoff, 2010). The new contract created the "open-market transfer system" that (a) protected the right of schools to choose which teachers they hired, regardless of seniority, (b) ended the "bumping" of novice teachers out of their position by more senior teachers who claimed the positions without input from school leaders, and (c) established a more open hiring process for hiring "excessed" teachers (Goertz, Loeb & Wyckoff, 2010). The change to the transfer policy was intended to change the highly criticized process of seniority-based transfers that were regarded as

contributing to the shuffling of ineffective teachers among schools, and often discouraging new teachers, causing some of them to leave the profession (Daly, T., Keeling, D., Grainger, R., & Grundies, A., 2008). However, the streamlining of the transfer process also allowed novice teachers to transfer to schools with more favorable working conditions, usually meaning that they were leaving the hard-to-staff schools where they initially started their careers to teach at schools with lower percentages of minority and low-income students (Goertz, Loeb & Wyckoff, 2010).

The open-market system also created the Absent Teacher Reserve (ATR) pool of more than 1,000 excessed teachers (Goertz, Loeb & Wyckoff, 2010). These are the teachers who have not found another permanent position and thus serve as day-to-day substitute teachers until they secure a full-time position (Goertz, Loeb & Wyckoff, 2010). Because these excessed teachers are tenured, the district still pays their salaries, which is estimated to cost the city $100 million per year (Martinez, 2010). Since the creation of the ATR pool, the DOE and UFT have disagreed about the effectiveness of teachers in the pool, and the willingness of the excessed teachers to seek new positions (Daly, T., Keeling, D., Grainger, R., & Grundies, A., 2008). Teachers in the ATR pool are usually more expensive than new teachers because of their experience, so school leaders have an incentive to hire new teachers over excessed teachers because new teachers are cheaper (Goertz, Loeb & Wyckoff, 2010). However, an agreement between the DOE and UFT now stipulates that school leaders can hire out of the ATR pool and pay the teacher the new-teacher salary, and the DOE will make up the difference based on the excessed teachers salary schedule (Goertz, Loeb & Wyckoff, 2010). Although there is little evidence of the effect of these new policies, the open-market system allows principals more control over rejecting ineffective teachers in hiring decisions (Goertz, Loeb & Wyckoff, 2010).

Alternative Certification

The DOE employed a variety of strategies to increase the selection pool of qualified teachers in the city. In 2000, the New York State Board of Regents created alternative certification routes that would allow districts to hire teachers participating in approved alternative certification programs, as long as they were able to pass the required teacher certification exams (Goertz, Loeb & Wyckoff, 2010). In response, the DOE collaborated with The New Teacher Project to develop the New York City Teaching Fellows Program, which selected its first cohort of fellows in 2000 (Goertz, Loeb & Wyckoff, 2010). Boasting an acceptance rate less than 15 percent, the program is widely regarded as one of the most competitive and effective teacher-preparation programs in the country (The New Teacher Project). Since it began, NYC Teaching Fellows had trained more than 26,000 talented teachers for the high-needs schools (The New Teacher Project). Much like Teach For America, NYC Teaching Fellows participate in a seven-week intensive training program the summer before teaching, and are assigned to a education master's degree program in one of a few participating universities across New York City (Goertz, Loeb & Wyckoff, 2010). The majority of fellows take positions in high-needs areas, like the Bronx and central Brooklyn, and teach in high-needs subjects, like math, science, bilingual education, Spanish, and special education (Goertz, Loeb & Wyckoff, 2010).

Creating alternate certification pathways for teachers proved to create a significant shift in the recruitment of teachers by the Department of Education. Contrary to the bleak statistics presented earlier in the chapter, the qualifications of teachers in the

schools with the greatest proportion of students receiving free-and-reduced-priced lunch improved between 2000 and 2005 (Goertz, Loeb & Wyckoff, 2010). The gap in teaching qualifications between low-and high-poverty schools declined since the implementation of the NYC Teaching Fellows Program (Goertz, Loeb & Wyckoff, 2010). Providing an alternate certification program specifically for New York City schools has had a positive effect on the quality of teachers teaching in the city's highest-needs schools.

School Leadership

As discussed in the previous chapters, school leadership has a significant impact on teacher retention. In an attempt to acknowledge this, the DOE has developed several initiatives intended to improve school leadership. The New York City Leadership Academy is focused on developing talented leaders for all schools in the city. The Middle School Leader Internship (MSLI) targets its focus on the difficult task of training leaders specifically for middle schools.

New York City Leadership Academy

The largest initiative to develop effective leaders in New York City was the launching of the Leadership Academy in 2003 (Goertz, Loeb & Wyckoff, 2010). The Leadership Academy is an independent non-profit organization that today is primarily funded by the DOE (Goertz, Loeb & Wyckoff, 2010). The Leadership Academy's core programs include the following:

- Aspiring Principals Program (APP): A 14-month leadership development program for aspiring school leaders that have committed to working in high-needs schools (NYC Leadership Academy). During the program's three phases, candidates participate in a six-week "boot camp" over the summer, a ten-month school residency under the guidance of an experienced mentor principal, and a planning summer to prepare candidates to effectively transition into their new leadership roles (NYC Leadership Academy). This program currently accounts for 13 percent of New York City principals (Goertz, Loeb & Wyckoff, 2010).
- New School Intensive (NSI): A leadership development and technical support program for candidates selected to open new, small schools (NYC Leadership Academy).
- School Leadership Coaching: A program designed and delivered by recently retired expert school leaders who coach new and experienced principals in strategies to improve student-learning outcomes (NYC Leadership Academy).
- Workshops: A program in collaboration with the Council of Supervisors and Administrators' Executive Leadership Institute to support school leaders in areas like instructional leadership, accountability, and data systems (NYC Leadership Academy).
- Strategic Consulting: The Academy provides New York City and other school districts and state education departments with strategic consulting and leadership advisory services (NYC Leadership Academy).

Studies have found that students in elementary and middle schools led by Leadership Academy graduates outperform students who are led by schools with principals who have not participated in the Leadership Academy (Corcoran, S., Schwartz,

A. & Weinstein, M., 2009). Despite this, it is still unclear whether or not these principals have increased retention of effective teachers (Goertz, Loeb & Wyckoff, 2010).

The positive relationship between student achievement and leadership by a participant of the Leadership Academy is an important consideration to future recommendations made by this report. Evidence showing positive effects of The NYC Leadership Academy increase the organization's capacity to expand its programs to more aspiring leaders, and its capacity to reach out to established school leaders throughout the city. The DOE having this capacity to reach more aspiring and established school leaders is critical to suggesting reasonable recommendations that target school leader development.

Middle School Leader Internship

Since his appointment as Chancellor of New York City's Department of Education in April of 2011, Dennis Walcott has focused on achievement at New York City middle schools. In an address at New York University's Steinhart School of Culture, Education, and Human Development, in September of 2011, he announced that an entire incoming class of the New York Teaching Fellows Program would be trained to work in middle schools in poor neighborhoods where vacancies are hardest to fill (Santos, 2011). In this speech he also laid out many of the reasons why middle schools are harder to staff and the five characteristics of successful middle schools (NYC Department of Education, 2011). The second characteristic on this list, behind literacy as a central focus on curriculum, "is stable, high quality leadership" (NYC Department of Education, 2011).

With this increased focus on middle schools, the DOE launched its Middle School Leader Internship program in the summer of 2012 (NYC Department of Education). MSLI is a "five-week, full-time professional internship designed to provide teachers interested in entering or advancing in careers in school-level leadership with the knowledge, skills and experiences necessary to pursue these opportunities, with a specific focus on middle schools" (NYC Department of Education). The program has three primary goals: (1) inspire participants to pursue leadership opportunities within NYC middle schools, (2) create a leadership learning opportunity that will enable participants to accurately assess their own professional learning trajectory and their development, and (3) serve as a stepping stone toward leadership pipelines to fill critical talent gaps across the city's middle schools (NYC Department of Education). To achieve these goals, participants work with a high-performing principal (referred to as mentor) in the principal's school throughout the summer (NYC Department of Education). The participants also attend weekly school leadership seminars lead by the MSLI program director from the Office of Teacher Recruitment and Quality at the DOE, and create a summer-long project with an accompanying presentation delivered to their cohort (NYC Department of Education). Upon completion, participants receive a $2,800 stipend for their participation (NYC Department of Education).

The first cohort of MSLI included nine participants (NYC Department of Education). The program was regarded as a success by interns, mentors, and the DOE and will be offered again this summer (NYC Department of Education). The DOE's commitment to the program showcases its understanding of the complexities of leading a middle school and its devotion to develop effective leaders for the job.

Mentoring

In 2004, the New York State Board of Regents began requiring all teachers—instead of just alternatively certified and uncertified teachers—with less than one year of teaching experience to receive mentoring prior to gaining full certification (Goertz, Loeb & Wyckoff, 2010). New York City implemented a $36 million teacher-mentoring program with goals to "increase teacher retention, enhance classroom instruction, and improve student achievement" (Office of the Mayor, 2006). The DOE collaborated with the UFT, the Council of School Supervisors and Administrators (CSA), New York City universities, and the New Teacher Center to create the Mentoring Program (Goertz, Loeb & Wyckoff, 2010). The key components to the program included (a) a highly-selective mentor selection process, (b) mentors who had full-time commitments to mentoring, (c) intensive professional development for mentors, and (d) regional rather than school-based assignments (Boyd, et al., 2010). Initial studies show the program appears to have little success in positively affecting teacher retention or student achievement (Rockoff, 2008). However, the studies do find that teachers who had mentors with prior experience working in their school or who spent more hours with their mentor had students with better reading and math achievement than the students of teachers whose mentors had no prior experience in the school or who spent less time with their teachers (Rockoff, 2008).

During the 2007-08 school year, the DOE made changes to the city's mentoring program and each school was required to form a New Teacher Induction Committee composed of school leaders, teachers, and union representatives (Goertz, Loeb & Wyckoff, 2010). This committee established a school's mentoring program, with the expectation from the DOE that in all schools experienced teachers will work with new teachers on a regular basis by observing lessons, developing lesson plans, and providing

continuous feedback and coaching (Goertz, Loeb & Wyckoff, 2010). During this year the Lead Instructional Mentor position was also created to work with each school's School Support Organization to support the development of a school-mentoring plan (Goertz, Loeb & Wyckoff, 2010).

Today there are a number of programs and new processes in place to improve teacher recruitment and retention of teachers. Although there is not hard evidence to prove the effects of The Leadership Academy and mentoring programs on teacher retention, the positive effects of The Leadership Academy on student achievement, especially in middle schools, is a promising outcome and will increase the longevity, capacity, and faith in the program from important stakeholders like parents, students, teachers, and the UFT. The success of the DOE's MSLI program in its pilot year also increases the DOE's capacity to influence future leaders, particularly in middle schools. The capacity of The NYC Leadership Academy and MSLI to influence future and current middle school school leaders, are important to keep in mind when developing new strategies to improve retention in the city.[5]

TEACHER EVALUATION AND ACCOUNTABILITY

The combination of Mayor Michael Bloomberg and New York City School Chancellor Joel Klein brought increased focus on student achievement and accountability (Goertz, Loeb & Wyckoff, 2010). Prior to this administration, the New York State Board of Regents established an accountability system that tied school performance standards to student achievement assessed through state test scores (Goertz, Loeb & Wyckoff, 2010).

[5] There is no available empirical evidence on the effect of these mentoring programs.

Much like what would eventually come through the No Child Left Behind Act, failure to meet these standards would trigger a mandatory planning process for the school to increase student achievement (Goertz, Loeb & Wyckoff, 2010). If a school continued to fail to meet the established standards, the school gained designation as a school in need of improvement (SINI) and could eventually lead to designation as a School Under Registration Review (SURR) if the school continued to fall below standards (Goertz, Loeb & Wyckoff, 2010). Eventually, poor performance by a SURR school could result in a school closure (Goertz, Loeb & Wyckoff, 2010). Although these new standards were perceived as tough by principals and school staff, in New York, unlike other states, there were no direct consequences for principals or teachers (Gootman, 2007). Consequently, there were no incentives created by this accountability system to truly affect school-level personnel (Goertz, Loeb & Wyckoff, 2010).

The lack of accountability for teachers is evidenced by the fact that less than two percent of New York City teachers were denied tenure in 2000 (Koppich & Showalter, 2008). The procedures to remove under-performing teachers were time intensive and the outcomes were often uncertain, leaving many principals in a position where they would avoid initiating the process altogether (Koppich & Showalter, 2008). The factors show the lack of systematic pressure to measure and improve teacher quality.

Today, principals conduct an annual performance review of teachers intended to assess strengths and weaknesses for the purposes of professional development and evaluating teachers for tenure (Goertz, Loeb & Wyckoff, 2010). Over the past ten years, the DOE has made efforts to make the evaluation of teachers a more rigorous process, as principals are encouraged to treat the years leading up to tenure as an opportunity to access teachers' strengths and weaknesses and work with struggling teachers to receive supports to improve (Goertz, Loeb & Wyckoff, 2010). Between 2006 and 2008, the

number of teachers denied tenure increased from 25 to 164 out of over 70,000 teachers (Goertz, Loeb & Wyckoff, 2010).

Legislation enacted in 2010 to support the State's Race to the Top application created a statewide comprehensive evaluation for teachers (Goertz, Loeb & Wyckoff, 2010). Teachers in New York State now receive ratings of highly effective, effective, developing, or ineffective that influence professional development and tenure decisions (Goertz, Loeb & Wyckoff, 2010). Forty percent of this evaluation is based on student improvement measured by a combination of state and local standardized tests (Goertz, Loeb & Wyckoff, 2010). Other inputs are negotiated locally, but usually include classroom evaluations by principals and other school leaders (Goertz, Loeb & Wyckoff, 2010). Teachers rated as ineffective for two years may be subject to dismissal (New York State Department of Education, 2010). To assist principals with these decisions, the DOE has provided them with value-added measures to inform tenure decisions (Goertz, Loeb & Wyckoff, 2010). These measures allow principals to see the effects teachers have had on student achievement on state assessments for an individual year. Chapter 5 will discuss the current state of teacher evaluations in New York City considering its critical importance to developing new strategies targeting teacher retention.

CONCLUSION

Teacher retention is not an issue that has gone unnoticed in New York City. Understanding the history and current strategies and programs that target compensation, working conditions, recruitment, and teacher evaluation is important when considering new approaches to targeting effective teacher retention in New York City schools.

Although there does not exist hard evidence to establish that programs discussed have been shown to have a significant impact on teacher retention in particular, there is evidence to show the capacity for some programs to positively effect student outcomes. Most notable is the success of The NYC Leadership Academy, in particular, the positive effects on student achievement shown in middle schools led by principals from the Academy. Also notable is the initial success of the MSLI and its potential to expand and include more prospective middle schools leaders.

Chapter 4: Smart Retention. The TNTP "Irreplaceables" Study

Evidenced in the last chapter, the New York City Department of Education is concerned about its teacher retention problem. It is clear that DOE connects teacher retention to student achievement. It is also clear that DOE realizes teacher retention is even more problematic in the city's highest-needs schools. With limited resources, DOE has attempted to combat this issue with increased compensation and professional development for teachers. However, as evidenced by the statistical analysis completed in Chapter 2, school leadership qualities are shown to have a significant relationship on teacher turnover. As such, DOE should consider focusing efforts to combat poor teacher retention in the city's hardest-to-staff schools by rethinking the role of school leaders.

This chapter will shift focus away from New York City to a national study completed by The New Teacher Project (TNTP). The purpose of this chapter to introduce a new approach to combating teacher turnover in nation's the hardest-to-staff schools. The chapter relies heavily on the TNTP study because the study was one of the first studies completed on a national scale that differentiates between high-performing and low-performing teachers and ties that into the discussion of retention strategies. The findings from the TNTP study highly influence the recommendations presented at the end of this report.

The 2012 study completed by TNTP concluded that districts across the country are not retaining some of the most effective teachers in the education profession (The New Teacher Project, 2012). TNTP is a national nonprofit founded by teachers in 1997

that works with schools, districts and states to provide excellent teachers to the students who need them most and advance policies and practices that ensure effective teaching in every classroom (TNTP, 2012). The study identified a group of teachers known as the "Irreplaceables"—teachers who are so successful they are almost impossible to replace, but often leave the most low performing schools as the result of neglect and inattention from school leaders (TNTP, 2010).

The study began by TNTP studying 90,000 teachers across four large, geographically diverse urban school districts and one charter management organization (CMO) (TNTP, 2010). To gain information on teacher effectiveness, researchers also collected student academic growth data or value-added results for approximately 20,000 of those teachers (TNTP, 2010). The study admits that these metrics cannot provide a complete picture of a teacher's performance or ability on their own, but that they are the most practical way to identify relationships and trends for the purposes of the study (TNTP, 2010). TNTP used the data to decipher between teachers whose students achieved better-than-anticipated results (called the "Irreplaceables") and teachers whose students performed exceptionally poorly (TNTP, 2010).

Although the study does not identify which districts participated, it does report the number of teachers who participated in the study from each district. Unlike districts A, B, and C, where participation ranged from 1,200 to 5,000 teachers, district D had approximately 12,000 teacher participants (TNTP, 2010). The New York City school district is the largest in the country, employing over 75,000 teachers (Department of Education). The second closest district in terms of number of teachers employed is the

Los Angeles Unified School District, with just over 31,000 teachers (Los Angeles Unified School District). Based on teacher participation percentages, it is far more likely district D represents the NYC school district. Furthermore, the study reports district D as having 75 percent of its students receiving free-and-reduced-price lunch, and 69 percent of its students reporting as African-American or Hispanic (TNTP, 2010). These percentages closely match the numbers reported by NYCDOE during the 2010-11 school year. This means that conclusions drawn from this study have particular importance in the city of New York because, regardless of whether or not district D is actually based in NYC, the demographics and size closely resemble the city's district.

Across the districts in the TNTP study, about 20 percent of the 90,000 teachers fell into the "Irreplaceables" category (TNTP, 2010). On average, every year the "Irreplaceables" help students learn two to three additional months' worth of math and reading compared to the average teacher, and five to six months more compared to those identified as low-performing teachers (TNTP, 2010). Teachers of this stature produce more than just above average academic results; they also provide a more engaging learning experience for students. For example, students placed in classrooms with a teacher identified as an "Irreplaceable" secondary math teacher are much more likely to say that their teacher cares, does not let them give up when things get difficult, and makes learning enjoyable (TNTP, 2010).

The problem that the study recognizes is that school leaders do not seem to know who these "Irreplaceable" teachers are in their schools (TNTP, 2010). The study estimates that when an "Irreplaceable" leaves a low-performing school, it can take 11

hires to find one teacher of comparable quality (TNTP, 2010). However, the study finds no effort on the part of school leaders to encourage these high achieving teachers to stay. Of the "Irreplaceables" surveyed, almost half in some districts indicated that their schools made little to no effort to retain them (TNTP, 2010). Two-thirds reported that their principal had not even encouraged them to stay (TNTP, 2010). TNTP estimated that in only one year, approximately 10,000 "Irreplaceables" in 50 of the country's largest school districts either left their district or left the teaching profession (TNTP, 2010). In one district from the study, nearly one-third of all "Irreplaceables" left within two years and almost half left within five years for reasons discussed in the following sections (TNTP, 2010).

SHIFTING AWAY FROM "BLIND" RETENTION STRATEGIES

This paper recommends not using overall teacher turnover numbers to track retention because it does not account for the quality of the teacher who is either staying or leaving a school. This paper makes the distinction that turnover in schools is acceptable, even necessary, as long as those teachers leaving the school are low performers. However, the TNTP study finds that just as the schools studied made little effort to retain their high performing teachers, they made almost no effort to urge low-performing teachers to leave (TNTP, 2010). In some cases these low-performing teachers were actually encouraged to stay—many of whom, after years of teaching, still do not perform as well as the average first-year teacher (TNTP, 2010).

Data collected suggest that schools retain their highest-performing and lowest-performing teachers at a similar rate (TNTP, 2010). School leadership highly influences this decision. In survey data, 26 percent of high-performing teachers reported, "Last year, someone from [their] school leadership team identified opportunities or paths for teacher leadership roles," while 31 percent of low-performing teachers reported receiving this information (TNTP, 2010). Thirty-seven percent of high-performing teachers and 31 percent of low-performing teachers reported "Last year, someone from [their] school leadership team encouraged [them] to keep teaching at [their] school" (TNTP, 2010).

Principals in these schools use retention strategies at similar rates for both high and low-performing teachers, and the effect is felt in actual turnover data. For example, in district D, during the 2009-10 school year, 89 percent of high-performing teachers and 88 percent of low-performing teachers remained at the school the following year (TNTP, 2010). In the four districts studied, 6 to 17 percent of high-performing teachers left their district at the end of each school year, compared with 6 to 21 percent of low-performing teachers (TNTP, 2010).

Even though these numbers reflect a problem that needs to be addressed, school leadership receive little direction from the district about what should be done. As previously mentioned, teacher turnover has been one of the most over-simplified issues in education, and teacher turnover is one of the most discussed and least understood topics in education. Consider one of the most influential reports about teacher retention that many noted organizations, like the Education Commission of the States, still promote: No Dream Denied (2003) from the National Commission on Teaching and America's Future.

The report identified high teacher turnover as a primary cause of poor school performance, reporting half of all new teachers leave the profession by their fifth year (NCTAF, 2003). The report recommended a concerted effort for all districts to reduce new teacher attrition by 50 percent in three years (NCTAF, 2003). Highly publicized research like this influenced programs like Teachers of Tomorrow in NYC. Although No Dream Denied brought attention to the issue of teacher turnover, it enforced the assumption that any increase in teacher retention was good for schools. Using this logic, school leaders should work just as hard to keep low-performing teachers in their schools as high-performing teachers in the name of increasing the overall retention rate (TNTP, 2010). Unfortunately, studies like No Dream Denied are influencing policies that incentivize principals to manage to a measure of decreasing overall turnover ratios instead of differentiating between their highest- and lowest-performing teachers. The idea of moving away from "blind" retention is an important point that will be addressed in the recommendations section of this report

This blind focus on raising overall teacher retention rates regardless of performance continues to inform education reform a decade later (TNTP, 2010). The perception that it is bad for the school and its students if a teacher leaves the profession is hard to change. However, if the teacher is low performing, and someone more talented replaces him or her, then both the students and the school benefit.

The TNTP study shows that schools have a three in four chance of replacing a low-performing teacher with a new teacher who will immediately be more effective in the classroom—and will likely improve over time (TNTP, 2010). Although most studies

show a relationship between excessive turnover and student achievement, a recent study showed that very low teacher retention rates could negatively affect student achievement (TNTP, 2010). High teacher retention rates seem to result in the same outcome of lowering student achievement as low turnover. This points to the need for turnover in general, but not at the extremes.

PERCEPTIONS

There are two strongly held perceptions about teacher performance that may expand the persistent misunderstanding of teacher retention reforms. The first is the notion that most low-performing teachers will improve to an acceptable standard in the future (TNTP, 2010). The second is that new teachers are usually less effective than experienced teachers (TNTP, 2010).

The TNTP study helps address these perceptions. It shows that struggling teachers rarely improve, even in schools where leaders make professional development a priority. Of the principals who participated in the study, over 70 percent identified "teacher development" as a top priority, compared to about one-third who listed "retention" as a top priority (TNTP, 2010). Even with development as a top priority, three years into the study the average experienced low-performing teacher remained less effective on student achievement than the average new hire (TNTP, 2010).

Despite the common held belief that a low-performing teacher's lack of success causes him or her to "self-select out," few leave the profession on their own (TNTP, 2010). In fact, about 75 percent of low-performing teachers remain at the same school

from year-to-year and half say they intend to remain teaching for the next ten years (TNTP, 2010).

CAUSES

The New Teacher Project concludes that these results are not inevitable, and that attrition of schools' highest-performing teachers can be prevented by factors controlled by school leaders (TNTP, 2010). The study found that less than 30 percent of "Irreplaceables" who planned to leave teaching in the next three years reported doing so primarily for personal reasons (moving, pregnancy, etc.) (TNTP, 2010). Over half said they planned either to continue teaching at a nearby school or working in education, and over 75 percent reported they would have stayed at their school had their school leaders addressed their main issue for leaving (TNTP, 2010). This last figure indicates that school leaders have a high influence over whether "Irreplaceables" decide to leave their schools. Unlike leaving the profession for personal reasons, school leaders do have control over the 75 percent of "Irreplaceables" who reported that they would have stayed at their school with encouragement from their school leaders.

The study found similar indicators at schools that retained a high percentage of their highest-performing teachers. Most notable was that principals in these schools were more likely to clearly communicate high expectations to teachers and ensure that teachers feel supported, and less likely tolerate ineffective teaching (TNTP, 2010). The indicators found in the TNTP study are closely related to the indicators that contributed to the school leadership score used in the report's statistical analysis in chapter 2, and support the relationship found between SLS and teacher retention. Conversely, the study found

that turnover rates of the highest-performing teachers were 50 percent higher in schools with weak instructional cultures than those with strong cultures (TNTP, 2010). Instructional cultures reflect upon the school leader's ability to establish high academic expectations and instructional supports—like professional development—for his or her staff (TNTP, 2012). This is highly problematic in low-achieving schools because they are more often characterized as having a weak school culture. In the study, only 32 to 45 percent of teachers at low-achieving schools said their school was "a good place to teach and learn," compared with 70 to 82 percent of teachers at high-achieving schools (TNTP, 2010).

CONCLUSION

The TNTP study posits, in line with this report, that the usual remedies for addressing teacher retention, like improved working conditions and providing financial incentives—like Teachers of Tomorrow bonuses—are part of the solution. However, using these strategies without considering the influence of school leadership is not sufficient. For years school leaders have been encouraged to increase retention rates in their schools. However principals are not equipped with the proper incentives or skills to ensure they are encouraging their highest-performing teachers to stay while encouraging their lowest-performing teachers to consider different career options. The study suggest that schools should not only retain more high-performing teachers, but also raise expectations for the profession and retain fewer low-performing teachers (TNTP, 2010). TNTP claims that this strategy would dramatically improve the quality of teaching in a school district, with immediate results, especially in student achievement (TNTP, 2010). The problem is not just retention; it is the retention of the right teachers.

Chapter 5: Recommendations

This report has given an overview of the research on teacher retention, presented a statistical analysis showing a correlation between effective school leadership and teacher retention in New York City middle schools, and highlighted the important processes and strategies the NYC Department of Education has employed to increase teacher retention. The final chapter will present the reader with an overview of the unique relationship between the union, city leadership, and schools. The relationship between the DOE and UFT is important to understand because in recent years the two parties have struggled to reach a consensus on appropriate evaluations for teacher assessment. Teacher evaluation strategies are essential to the approach to teacher retention this report will recommend because principals need tools to differentiate between their highest-and lowest-performing teachers. The following section will discuss recent developments in negotiations between the DOE and the UFT over teacher evaluations. The chapter will conclude with the final recommendations made to the DOE to use school leadership as a tool to increase high-performing teacher retention in New York City middle schools.

THE POLITICAL CLIMATE OVER TEACHER EVALUATION

The strategy of using smarter retention strategies outlined in the previous chapter is only possible with strong teacher assessment tools for both the DOE and school leaders to evaluate teachers (TNTP, 2012). It is impossible to have a discussion of teacher evaluation without noting the current negotiations between New York State, the New York City Department of Education, and the UFT.

Legislation that passed in New York State in 2010 to help the state compete for a Race to the Top grant of $700 million has yet to be implemented in New York City (Baker & Santora, 2013). The plan developed for this grant included provisions to create a teacher evaluation system that assessed teachers as highly effective, effective, developing, or ineffective. The UFT rejected this plan. (Baker & Santora, 2013). As mentioned in chapter 3, 20 percent of the rating was to be based on students' growth on state tests, 60 percent on classroom observations, and the other 20 percent was to be based on local measures determined by bargaining with the union (Baker & Santora, 2013). Because of the lack of endorsement by the UFT, the city failed to reach the January 17, 2013 deadline to submit a teacher evaluation plan, (set by Governor Andrew Cuomo) thus resulting in the city losing $250 million in state aid. Failure to meet the deadline also placed the city at risk of losing up to $200 million more in state and other funding separate from the Race to the Top grant, raising the possibility reducing staff and programs (Baker & Santora, 2013 and Kaminer, 2013).

Mayor Bloomberg later explained that the deal between the UFT fell apart when the union demanded a sunset clause be put in place for 2015 (Baker & Santora, 2013). The DOE felt this clause would make it impossible to remove ineffective teachers because the dismissal process takes two years, and by the time an ineffective teacher would be separated, the evaluation system would no longer be in place (Baker & Santora, 2013). The UFT also wanted more ability for teachers to challenge the evaluation process than the DOE was willing grant (Baker & Santora, 2013). The UFT, like many unions across the country, is concerned about the power placed in the hands of administrators and the heavy reliance on test scores that shape these evaluations (Baker & Santora, 2013).

In late March of 2013, Governor Cuomo announced he and other legislative leaders had reached an agreement to help New York City and the UFT settle on an evaluation system and prevent the city from losing millions in state and federal funding (Kaminer, 2013). The agreement will extend the deadline for the city and the union to work out the details of an evaluation system to May 29, 2013 (Kaminer, 2013). If the two parties fail to reach an agreement by the deadline, the plan will be negotiated by binding arbitration overseen by the state education commissioner (Kaminer, 2013).[6] The current plan states that the evaluation system would remain in effect indefinitely—unlike the two-year agreement the union initially proposed—but can be altered through agreement by the school district and the union (Kaminer, 2013).

Although there has yet to be any final decisions made about what the teacher evaluation system will look like, these negotiations highlight the fragile relationship between the DOE and the UFT. Tensions between UFT leadership and the DOE leadership—particularly Chancellor Dennis Walcott, as well as Mayor Bloomberg—are highly publicized (Baker & Santora, 2013).[7] In early 2013, before the deadline for the teacher evaluation plan expired, the UFT bought a $1 million television advertising campaign accusing the mayor of "going after teachers again" (Baker & Santora, 2013).

The current and evolving frayed relationship between the DOE's leadership and the UFT is important to consider when suggesting strategies to improve effective teacher retention, especially when teacher evaluation is an important part of the plan. With this is mind, the political climate in New York City may change in the upcoming year with the

[6] At this time this report was written, thus far no agreements have been reached between the DOE and the UFT.

[7] Michael Mulgrew, the president of the UFT has been quoted in New York newspapers explaining how these negotiations in particular are just another, "example of this mayor not being able to work with anyone" (Baker & Santora, 2013).

election of a new mayor. Capitalizing on this opportunity to work with a new administration will be important for the DOE to consider in negotiations with the UFT.

RECOMMENDATIONS

After considering the relevant problems, current strategies, and political climate surrounding education in New York City, this report offers the following recommendations to the New York City Department of Education to increase retention among the most effective teachers in the city's middle schools. The recommendations do not suggest the DOE should create any new programs; rather the DOE should adjust the programs currently in place to address the gaps shown in middle schools found throughout this report. Working within the programs already available in the city ensures that the DOE will face less capacity issues when trying to implement these recommendations. For example, The NYC Leadership Academy already has strong support from a variety of important stakeholders because of its proven success. Working within the capacity of the Academy will ease the problems created by a lack-of-stakeholder buy-in that some new policies face during implementation. Employing the strategy of working within the DOE's existing capacity also puts a decreased financial burden on the city, which is of particular importance during a time of decreased funding being devoted to education.

1. **To emphasize the importance of the role school leaders play in teacher retention, the DOE should consider creating professional development workshops for the New Leadership Academy to deliver to current middle**

school leaders that teach them strategies to reward and encourage high-performing teachers.

In most districts, managing teacher retention is not considered a priority for principals; in fact, none of the districts from the TNTP study train or evaluate principals based on their willingness and ability to make smart decisions about teacher retention based on performance (TNTP, 2012). As explained in chapter 3, unless school leaders receive support on strategies to increase retention among their highest-performing teachers, it is unrealistic for the DOE to assume school leaders will do something they do not perceive they were hired to do (TNTP, 2012). When the DOE and the UFT settle upon a teacher evaluation system, school leaders should receive comprehensive professional development on their critical role in the implementation of the system.

Once school leaders have a uniformed system within which to identify their highest- and lowest-performing teachers, they may be better positioned to target specific strategies to encourage their highest-performing teachers to stay and their lowest-performing teachers to leave.

Collaboration with the UFT is essential in the process of creating strategies school leaders can use with their lowest-performing teachers. As evidenced in previous chapters, it is much less burdensome for the DOE if low-performing teachers decide to leave the profession on his or her own rather than staying in the system either as teachers or in the ATR pool. The new should revolve around effective, honest, and constant feedback from school leaders to all teachers regardless of experience. As shown in the TNTP study, receiving consistent positive feedback from school leaders was an important consideration in teachers' decisions to stay in their schools. Using this logic, consistent

negative feedback to low-performing teachers would encourage them to seek employment in another profession on their own.

2. **To create incentives for school leaders to reward their highest-performing teachers and in an effort to combat "blind" retention, the DOE should considering working with the state to redesign the Teacher's of Tomorrow Grant so school leaders of low-performing schools could use the money to reward their hardest-working teachers.**

Currently the TOT grant money is awarded to any new teacher (up to four years of service) working in a school identified by the state as hard-to-staff. This represents a strategy of "blind" retention because the TOT award award does not distinguish low- and high-performing teachers. Allowing school leaders to use this money to reward the highest-performing teachers would allow the grant to support teachers performing well—even beyond their fourth year of teaching. To avoid too much power being placed in the hands of school leaders, schools should consider developing teams made up of school leaders, administrators, union representatives, teacher leaders, and student leaders to allocate the grants to the schools' highest-performing teachers. This strategy of incorporating a variety of school personnel and students to make these decisions builds off the strategy detailed in chapter 3 to incorporate in the "School-Based Option" used in some schools to make hiring decisions. To recognize the hard work of these teachers, the awards should be announced in a public setting, for example over the PA system in the morning or at an end-of-year school assembly. Public recognition as a strategy to increase staff morale and retention was noted in the TNTP study (TNTP, 2012).

This recommendation is similar to the SPBP also presented in chapter 3 that was abandoned by the city in 2011. The main difference between this recommendation and SPBP is that an individual teacher's reward is not based on the performance of his or her whole school. As noted earlier in the report, the program was abandoned because it was shown to have had little effect on the way teachers approached their job, especially in low-performing schools because these schools were not likely to reach targeted goals. Redesigning the TOT grant would place more responsibility on each individual teacher creating a more effective incentive scheme.

3. **To create a larger pool of high-performing school leaders, the DOE should consider expanding the Middle School Leader Internship program and placing added emphasis on effective teacher evaluation strategies.**

The program offers a promising opportunity to not only develop new talent among prospective school leaders, but also to give current school leaders an opportunity to reflect on their own leadership abilities. Expanding the program to include more principal and leader participants may result in larger pools of effective and prepared school leaders for the future. Similar to the rationale of the first recommendation, taking this mentoring opportunity to emphasize the role school leaders play in teacher retention is an important feature that should be added to the program, as in many districts school leaders do not realize their important role in retaining teachers. The pressures of other administrative tasks, hiring new staff, and the tedious and often uncertain process of removing teachers mentioned earlier in the report impedes principals from focusing on using smarter

retention strategies. The MLSI offers an opportunity for aspiring principals of New York City middle schools to be given mentoring in these important areas.

4. **In recognition of the inadequate system currently in place to track teacher turnover in schools, the DOE should consider creating a data-system that measures teacher retention by differentiating between the numbers of high- and low-performing teachers leaving a school, and tie principals' evaluations to their performance on this metric.**

Although information is available from the New York City Department of Education about overall teacher turnover rates at each school, there is no differentiation in the quality of teachers who are leaving the system. A school with a teacher turnover rate of 20 percent does not necessarily mean the school leader is doing a better job at retaining his or her teachers than a school with a teacher turnover ratio of 10 percent. The school leader at the first school could be doing a better job at encouraging his low-performing teachers to leave the teaching profession, while the second school leader could be retaining these low-performing teachers and losing his high-performing teachers to different schools.

If school leaders were held accountable to track their performance in this area, they maybe better motivated to employ strategies for improvement. Of course, this is only possible with the use of a standardized teacher evaluation method that incorporates more than just value-added measures, and should be agreed upon with the UFT. Establishing this data system could eventually lead to new incentive programs for schools that improve the number of high-performing teachers they retain year-to-year.

Inherent in the recommendations is the assumption that the DOE and UFT will reach an agreement on an effective teacher evaluation system within the year. Taking into consideration the political climate of New York City, the latest studies on effective teacher retention, the relationship between effective school leadership and teacher turnover, and the current processes and strategies the DOE employs to affect teacher retention, these recommendations represent a comprehensive plan to increase high-performing teacher retention through effective school leadership in New York City middle schools. The report recognizes the capacity of the DOE to adopt the recommendations in order to make implementation as seamless as possible. Most important, the recommendations recognize the importance of strengthening the role of leaders in middle schools, how this role influences the highest-performing teachers to stay in the hardest-to-staff schools, and ultimately influence the lives of thousands of middle school students in New York City.

References

Baker, A., & Santora, M. (2013, January 17) No deal on teacher evaluations; City risks losing $450 million. *The New York Times*. Retrieved from http://www.nytimes.com/2013/01/18/nyregion/new-york-city-talks-on-teacher-evaluations.html?pagewanted=1

Barnes, G., Crowe, E., & Schaefer, B., (2002). "The Cost of Teacher Turnover in Five School Districts: A Pilot Study." National Commission on Teaching and America's Future. Retrieved from http://nctaf.org/wp-content/uploads/2012/01/NCTAF-Cost-of-Teacher-Turnover-2007-full-report.pdf

Bower, C. (2010, January 11). [Web log message]. Retrieved from http://www.edpolicythoughts.com/2010/01/are-nyc-schools-farm-system-for-suburbs.html

Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2010). "The Influence of School Administrators on Teacher Retention Decisions." American Education Research Journal Vol 48:2 pp. 303-333

Brewer, D. (1993). "Principals and Student Outcomes: Evidence From U.S. High Schools." Economics of Education Review Vol 12:4 pp. 281-292.

Brown, K., & Wynn, S. (2009). "Finding, Supporting, and Keeping:

The Role of the Principal in Teacher Retention Issues, Leadership and Policy in Schools" Vol 8:1 pp. 37-63

Center For Education Compensation and Reform. (2010). "Case Summary: New York City's School-Wide Performance Bonus Program." Retrieved from http://cecr.ed.gov/pdfs/summaries/CECR_CS_NYC_PerfBonusProgram.pdf

Corcoran, S., Schwartz, A. & Weinstein, M. (2009). "The New York City Aspiring Principals Program: A School-Level Evaluation." Report from Institute for Education and Social Policy, New York University. Retrieved from http://steinhardt.nyu.edu/scmsAdmin/uploads/003/852/APP.pdf

Daly, T., Keeling, D., Grainger, R., & Grundies, A. (2008). "Mutual Benefits: New York City's Shift to Mutual Consent in Teacher Hiring." The New Teacher Project. Retrieved from www.tntp.org/publications/Mutual_Benefits.html .

Dwyer, C., et al. (2007). "America's Challenge: Effective teachers for at-risk schools and students." The National Comprehensive Center for Teacher Quality. Retrieved from http://www.tqsource.org/publications/NCCTQBiennialReport.pdf

Goertz, M., Loeb, S., & Wyckoff, J. (2010). "Recruiting, evaluating, and retaining teachers: The children first strategy to improve New York City's teachers." New York City Reform Retrospective Project. Retrieved from http://www.edweek.org/media/12nyc_chapter_7_teachers.pdf

Gootman, E. (2007, November 15). A New Effort to Remove Bad Teachers. *The New York Times*. Retrieved from http://www.nytimes.com/2007/11/15/education/15teacher.html?_r=1

Greenhouse, S. (2001, January 26). Teachers' union seeks parity with salaries in the suburbs. The New York Times. Retrieved from http://www.nytimes.com/2001/01/26/nyregion/teachers-union-seeks-parity-with-salaries-in-the-suburbs.html

Herszenhorn, D. (2006, April 19). New York City offers housing subsidy as teacher lure. The New York Times. Retrieved from http://www.nytimes.com/2006/04/19/nyregion/19teach.html?pagewanted=all&_r=0

Johnson, S., & Birkeland S. (2003). "Pursuing a 'Sense of Success': New Teachers Explain Their Career Decisions." *American Education Research Journal*. Vol. 40, No. 3, pp. 581-617

Kaminer, A. (2013, March 25). Deal may end city's standoff with teachers. *The New York Times*. Retrieved from http://www.nytimes.com/2013/03/26/nyregion/albany-moves-to-end-standoff-in-new-york-city-over-teacher-evaluations.html

Koppich, J. & Showalter C. (2008). Strategic Management of Human Capital: A Cross-Case Analysis of Five Districts. Wisconsin: University of Wisconsin- Madison,

Consortium for Policy Research in Education. Retrieved from http://www.smhc-cpre.org.

Leithwood, K., & Jantzi, D. (1999). “The Relative Effects of Principal and Teacher Sources of Leadership on Student Engagement With School.” Educational Administration Quarterly Vol. 35, Supplemental 679-706.

Los Angeles Unified School District. (n.d.).Retrieved from http://notebook.lausd.net/portal/page?_pageid=33,49153&_dad=ptl

Martinez, B. (2010, July 1). "More Teachers to Lose Positions—but Not Pay." Wall Street Journal. Retrieved from http://online.wsj.com/article/SB10001424052748704334604575339142634105522.html

Mees, G. (2008). “The Relationships Among Principal Leadership, School Culture, And Student Achievement in Missouri Middle Schools.” The University of Missouri—Columbia.

New York State Education Department. (2010). [Press Release] "New York State Education Department Proposes Race to the Top Legislative Reforms with Support of New York State United Teachers and the United Federation of Teachers." Retrieved from http://www.oms.nysed.gov/press/RTTT_NYSUTMay11.html

NYC Department of Education. (2011, September 20). [Speech] "In major policy address, Chancellor Dennis M. Walcott calls middle schools "Ripe for Opportunity," lays out a bold strategy for success. Retrieved from http://schools.nyc.gov/offices/mediarelations/newsandspeeches/2011-2012/msspeechatnyu92011.htm

NYC Department of Education. (n.d.). About us. Retrieved from http://schools.nyc.gov/AboutUs/default.htm

NYC Department of Education. (n.d.). Class size reports. Retrieved from http://schools.nyc.gov/AboutUs/data/classsize/classsize.htm

NYC Department of Education. (n.d.). Financial Support. Retrieved from http://schools.nyc.gov/TeachNYC/incentives/financial/default.htm

NYC Department of Education. (n.d.). Middle School Leader Internship. Retrieved from http://schools.nyc.gov/AboutUs/leadershippathways/Opportunities/schoolleadership/MiddleSchoolInternship.htm

NYC Department of Education. (n.d.). NYC Data. Retrieved from http://schools.nyc.gov/Accountability/data/default.htm

NYC Department of Education. (n.d.). NYC Teacher Salary. Retrieved from http://schools.nyc.gov/NR/rdonlyres/EDDB658C-BE7F-4314-85C0-03F5A00B8A0B/0/salary.pdf

NYC Department of Education. (n.d.). Scholarships, Incentives, and Special Programs. Retrieved from http://teachnycprograms.net/hsp/

NYC Department of Education. (n.d.) Special Education District 75. Retrieved from http://schools.nyc.gov/Offices/District75/default.htm

NYC Department of Education. (n.d.) Test Results. Retrieved from http://schools.nyc.gov/Accountability/data/TestResults/ELAandMathTestResult

NYC Leadership Academy. (n.d.). Retrieved from http://www.nycleadershipacademy.org

Office of the Mayor. (2006, August 23). [Press Release] "Mayor Michael R. Bloomberg and Chancellor Joel I. Klein Announce New Mentoring Program for Incoming Teachers." Retrieved from http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2004b%2Fpr227-04.html&cc=unused1978&rc=1194&ndi=1

Otterman, S. (2011, July 17). New York City abandons teacher bonus program. *The New York Times*. Retrieved from http://www.nytimes.com/2011/07/18/education/18rand.html

Rockoff, J. (2008). [Working Paper] "Does Mentoring Reduce Turnover and Improve Skills of New Employees? Evidence from Teachers in New York City." Retrieved from http://www.nber.org/papers/w13868

Santos, F. (2011, September 20). Walcott's plan to strengthen middle schools draws mixed reaction. *School Book*. Retrieved from http://www.schoolbook.org/2011/09/20/walcott-outlines-plan-to-strengthen-middle-schools/

The New Teacher Project (n.d.). Retrieved from http://tntp.org/what-we-do/training/teaching-fellows

The New Teacher Project. (2012). "The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools." Retrieved from http://tntp.org/irreplaceables

Wimberly, G., & Noeth R. (2005). "College Readiness Begins in Middle School." ACT Policy Report. Retrieved from http://www.act.org/research/policymakers/pdf/CollegeReadiness.pdf